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By Alameda County Environmental Health at 9:52 am, Jul 25, 2014



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July 23, 2014

Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California
Fuel Leak Case No. RO0000251
GeoTracker Global ID #T0600101472

I have reviewed the attached report dated July 23, 2014.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by AECOM, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13257(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

A handwritten signature in blue ink, appearing to read "Nicole Arceneaux".

Nicole Arceneaux
Project Manager

Attachment: Second Quarter 2014 Groundwater Monitoring Report by AECOM

July 23, 2014

Mr. Keith Nowell
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

**Subject: Second Quarter 2014 Groundwater Monitoring Report
Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California
Fuel Leak Case No. RO0000253**

Dear Mr. Nowell,

On behalf of Chevron Environmental Management Company's (EMC's) affiliate Union Oil Company of California ("Union Oil"), AECOM is pleased to present the second quarter 2014 groundwater monitoring report for the site located at 3535 Pierson Street in Oakland, California (site) (**Figure 1**). The locations of the former and current site features are illustrated on **Figure 2**. Quarterly groundwater monitoring is conducted to evaluate the distribution of petroleum hydrocarbon constituents in groundwater beneath the site. Groundwater sampling was performed by Gettler-Ryan Inc. (Gettler-Ryan) of Dublin, California. This report summarizes sample results collected from wells associated with the site during the second quarter of 2014.

Groundwater Monitoring Field Data

The depth to groundwater was measured for seven monitoring wells (MW-A and MW-4 through MW-9) at the site on April 17, 2014, and these depths were converted to groundwater elevations (**Table 1**). Copies of the groundwater gauging logs are included in **Attachment A**. Groundwater elevation data were used to construct a groundwater elevation contour map (**Figure 2**). The groundwater elevation data collected from well MW-A was not used in contouring because the well is screened in the deeper aquifer. The groundwater flow direction is to the north northeast with a calculated average hydraulic gradient of approximately 0.06 feet per foot (**Figure 2**). The depth to groundwater at the site ranged from 11.43 to 16.65 feet below the top of well casings with calculated elevations ranging from 138.14 to 143.19 feet above mean sea level.

Groundwater Sampling and Analytical Results

Groundwater samples were collected from monitoring wells MW-A and MW-4 through MW-9 on April 17, 2014. The site wells historically have poor recharge, so pre-purge samples are collected. If the wells do not recharge in 2 hours, the pre-purge samples are submitted for analysis. After purging a minimum of three well volumes, only MW-A and MW-8 recharged within the 2-hour period and post-purge samples were submitted for analysis. Temperature, pH, and electrical conductivity readings were recorded during purging, and copies of those purge logs are presented in **Attachment A**. Laboratory analyses of the groundwater samples were performed by BC Laboratories, Inc. (BC Labs) of Bakersfield, California. The BC Labs analytical report dated May 2, 2014, is included as **Attachment B**. Groundwater samples were analyzed for the following based on historical trends at each monitoring well:

- Total petroleum hydrocarbons as diesel range organics (TPH-DRO) by method Luft/TPHD with silica gel cleanup;

- Total petroleum hydrocarbons as gasoline range organics (TPH-GRO) by Environmental Protection Agency (EPA) Method 8015B;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260B; and
- Fuel oxygenates, including methyl t-butyl ether (MTBE), t-amyl methyl ether (TAME), t-butyl alcohol (TBA), diisopropyl ether (DIPE), and ethyl t-butyl ether (ETBE), ethanol, 1,2 dibromomethane (EDB), and 1,2-dichloroethane (EDC) by EPA Method 8260B.

Analytical results are presented in **Table 1**, **Table 2**, and **Figure 3** for this quarterly groundwater monitoring event. The following presents a brief summary of the analytical sample results:

- ETBE, DIPE, TAME, EDB, EDC, and ethanol were not detected in any of the groundwater samples analyzed.
- TBA was detected for MW-5 at 310 micrograms per liter ($\mu\text{g/L}$).
- TPH-DRO was detected for MW-5 at 960 $\mu\text{g/L}$.
- TPH-GRO was detected for MW-5 at 27,000 $\mu\text{g/L}$.
- MTBE was detected in the groundwater samples collected from MW-5 and MW-8 at 1.4 $\mu\text{g/L}$ and 1.1 $\mu\text{g/L}$, respectively.
- Toluene, ethylbenzene, and total xylenes were detected in the groundwater sample collected from MW-5 at 2.5 $\mu\text{g/L}$, 160 $\mu\text{g/L}$, and 1,100 $\mu\text{g/L}$, respectively. Historical concentrations of toluene, ethylbenzene, and total xylenes detected for MW-5 have shown an overall decreasing trend.

A summary of historical groundwater analytical data through April 2014 is presented in **Tables 3 through 5**.

Approximately 50.5 gallons of purge water was generated during the groundwater monitoring event. The purge water generated during sampling activities was transported by Clean Harbors Environmental Services to Evergreen Oil located in Newark, California.

During the fourth quarter of 2012, 0.39 feet of free product/light non-aqueous phase liquid (LNAPL) was observed in well MW-5. Free product/LNAPL has not been observed in MW-5 since that time.

Conclusions and Recommendations

The sample results from the groundwater monitoring activities at the site indicate the following.

- Petroleum hydrocarbons were not detected in the groundwater samples collected from MW-A, MW-4, MW-6, MW-7, and MW-9.
- MW-5 continues to show elevated petroleum hydrocarbon concentrations; however, the concentrations observed in 2014 have generally been the lowest observed to date.
- MTBE was detected in the groundwater samples collected from MW-5 and MW-8 at 1.4 $\mu\text{g/L}$ and 1.1 $\mu\text{g/L}$, respectively.

Future Activities

Groundwater Monitoring

AECOM will coordinate monitoring and sampling activities as per the established schedule. AECOM will submit quarterly groundwater monitoring and sampling reports.

Additional Activity

AECOM is working with ACEH to define the scope of work for additional site assessment. Once approval is received from ACEH, AECOM will finalize the work plan.

Remarks/Signatures

The interpretations in this report represent AECOM's professional opinions and are based, in part, on the information supplied by Gettler-Ryan and BC Labs. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended. If you have any questions regarding this project, please contact James Harms at (916) 414-5800.

Sincerely,



James Harms
Project Manager



Sara Arav Piper, PG #9137
Project Geologist



ccs: Ms. Nicole M. Arceneaux, EMC (via electronic copy)
DeLong Liu, United Brothers Enterprise, Inc., property owner (via paper copy)

Enclosures:

Tables

Table 1	Current Groundwater Monitoring Data and Analytical Results
Table 2	Current Groundwater Analytical Results - Oxygenate Compounds
Table 3	Historical Groundwater Monitoring Data and Analytical Results
Table 4	Historical Groundwater Analytical Results - Oxygenate Compounds
Table 5	Additional Historical Analytical Results

Figures

Figure 1	Site Location Map
Figure 2	Groundwater Elevation Contour Map – Second Quarter 2014
Figure 3	Groundwater Concentration Map – Second Quarter 2014

Attachments

Attachment A	April 17, 2014, Groundwater Data Field Sheets
Attachment B	BC Laboratories, Inc. Analytical Report #5781

TABLES

Table 1
Current Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	COMMENTS
MW-A	154.79	4/17/2014	16.65	138.14	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-4	153.48	4/17/2014	11.96	141.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-5	153.66	4/17/2014	12.02	141.64	0	960	27,000	<0.50	2.5	160	1,100	
MW-6	154.62	4/17/2014	11.43	143.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-7	155.38	4/17/2014	13.82	141.56	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-8	153.71	4/17/2014	11.90	141.81	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-9	153.37	4/17/2014	11.73	141.64	0	<50	<50	<0.50	<0.50	<0.50	<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level.

BTEX compounds analyzed by Environmental Protection Agency Method 8260B

TPH-DRO analyzed by Luft/TPHd method with silica gel cleanup

TPH-GRO analyzed by Environmental Protection Agency Method 8015B

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

ID = Identification

TOC = Top of casing

ft = Feet

DTW = Depth to water

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total xylenes

Table 2
Current Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	ETBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)
MW-A	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-4	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-5	4/17/2014	1.4	310	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-6	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-7	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-8	4/17/2014	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50
MW-9	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

ID = Identification

µg/L = Micrograms per liter

MTBE = Methyl t-butyl ether

TBA = t-butyl alcohol

DIPE = Diisopropyl ether

ETBE = Ethyl t-butyl ether

TAME = t-amyl methyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-A	--	12/18/1990	--	--	--	73	ND	ND	ND	ND	ND	
	--	5/3/1991	--	--	--	ND	ND	ND	ND	ND	ND	
	--	8/7/1991	--	--	--	ND	ND	ND	ND	ND	ND	
	--	11/8/1991	--	--	--	ND	ND	ND	ND	ND	ND	
	151.80	2/6/1992	19.88	131.92	0	ND	ND	ND	ND	ND	ND	
	151.80	8/4/1992	18.95	132.85	0	ND	ND	ND	ND	ND	0.51	
	151.80	2/10/1993	17.71	134.09	0	ND	ND	ND	ND	ND	ND	
	151.80	2/10/1994	15.25	136.55	0	ND	ND	ND	0.52	ND	0.92	
	151.80	2/9/1995	15.68	136.12	0	ND	ND	ND	ND	ND	ND	
	151.80	2/6/1996	12.52	139.28	0	120	ND	ND	ND	ND	2.1	
	151.80	2/5/1997	13.01	138.79	0	61	ND	ND	ND	ND	ND	
	151.80	2/2/1998	11.91	139.89	0	ND	ND	ND	ND	ND	ND	
	151.80	2/22/1999	11.24	140.56	0	ND	ND	ND	ND	ND	ND	
	151.80	2/26/2000	12.16	139.64	0	ND	ND	ND	1.01	ND	ND	
	151.80	3/7/2001	11.91	139.89	0	131	ND	ND	ND	ND	ND	
	151.80	2/22/2002	14.08	137.72	0	<50	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	2/22/2003	14.41	137.39	0	93	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	2/3/2004	14.32	137.48	0	60	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	2/18/2005	14.21	137.59	0	<50	<50	<0.50	<0.50	<0.50	<0.50	
	151.80	3/29/2006	12.72	139.08	0	<200	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/28/2007	13.98	137.82	0	92	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/22/2008	12.68	139.12	0	<50	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/27/2009	14.35	137.45	0	53	<50	<0.30	<0.30	<0.30	<0.60	
	151.80	3/23/2010	19.55	132.25	0	<58	--	--	--	--	--	
	154.79	6/16/2010	17.85	136.94	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	9/29/2010	15.50	139.29	0	<1200	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	12/21/2010	14.43	140.36	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	3/10/2011	17.70	137.09	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	06/07/2011	13.92	140.87	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	08/18/2011	18.83	135.96	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	10/04/2011	14.67	140.12	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	01/24/2012	16.75	138.04	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	04/06/2012	17.14	137.65	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	07/02/2012	14.79	140.00	0	<40	<50	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-A cont.	154.79	10/4/2012	17.52	137.27	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	1/23/2013	15.08	139.71	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	4/22/2013	15.60	139.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	7/31/2013	16.42	138.37	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	10/17/2013	16.57	138.22	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	2/24/2014	17.33	137.46	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.79	4/17/2014	16.65	138.14	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-4	153.48	6/16/2010	11.13	142.35	0	<50	58	<0.50	9.7	1.3	16	
	153.48	9/29/2010	12.62	140.86	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	12/21/2010	11.17	142.31	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	3/10/2011	10.57	142.91	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	06/07/2011	10.94	142.54	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	08/18/2011	12.07	141.41	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	10/04/2011	12.70	140.78	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	01/24/2012	12.40	141.08	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	04/06/2012	11.10	142.38	0	<40	390	<0.50	3.8	11	150	
	153.48	07/02/2012	12.14	141.34	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	10/4/2012	13.43	140.05	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	1/23/2013	11.64	141.84	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	4/22/2013	12.22	141.26	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	7/31/2013	13.24	140.24	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	10/17/2013	13.85	139.63	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.48	2/24/2014	13.06	140.42	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
153.48	4/17/2014	11.96	141.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0		
MW-5	153.66	6/16/2010	11.95	141.71	0	3,000	29,000	580	6,800	850	7,200	
	153.66	9/29/2010	13.67	139.99	0	64,000	29,000	220	4,100	2,500	23,000	
	153.66	12/21/2010	11.17	142.49	0	11,000	50,000	81	4,800	2,200	22,000	
	153.66	3/10/2011	11.35	142.31	0	4,900	48,000	69	3,600	1,700	20,000	
	153.66	06/07/2011	11.45	142.21	0	3,700	40,000	32	2,300	1,500	16,000	
	153.66	08/18/2011	12.30	141.36	0	5,400	30,000	29	1,000	980	7,200	
	153.66	10/04/2011	13.72	139.94	0	20,000	42,000	21	2,400	2,400	20,000	
	153.66	01/24/2012	12.20	141.46	0	46,000	71,000	<25	1,100	1,400	10,000	

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Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-5 cont.	153.66	04/06/2012	11.88	141.78	0	21,000	58,000	9.9	880	660	9,800	
	153.66	07/02/2012	12.75	140.91	0	30,000	53,000	89	590	1,000	12,000	
	153.66	10/4/2012	16.03	137.94	0.39	No Sample Collected - Free Product in Well						
	153.66	1/23/2013	12.02	141.64	0	22,000	54,000	<25	160	1,100	13,000	
	153.66	4/22/2013	12.37	141.29	0	7,600	39,000	0.70	65	330	4,500	
	153.66	7/31/2013	15.62	138.04	0	11,000	35,000	1.0	59	470	3,500	
	153.659999	10/17/2013	16.41	137.25	0	<50	86,000	<10	66	770	9,300	
	153.66	2/24/2014	15.27	138.39	0	1,700	3,900	<0.50	4.5	240	1,800	
	153.66	4/17/2014	12.02	141.64	0	960	27,000	<0.50	2.5	160	1,100	
MW-6	154.62	12/21/2010	12.10	142.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	3/10/2011	11.36	143.26	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	06/07/2011	11.33	143.29	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	08/18/2011	13.00	141.62	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/04/2011	14.02	140.60	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	01/24/2012	11.94	142.68	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	04/06/2012	11.39	143.23	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	07/02/2012	11.49	143.13	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/4/2012	16.09	138.53	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	1/23/2013	11.41	143.21	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	4/22/2013	11.43	143.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	7/31/2013	15.71	138.91	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	10/17/2013	16.83	137.79	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	154.62	2/24/2014	15.22	139.40	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
154.62	4/17/2014	11.43	143.19	0	<50	<50	<0.50	<0.50	<0.50	<1.0		
MW-7	155.38	12/21/2010	13.46	141.92	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	3/10/2011	12.07	143.31001	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	06/07/2011	12.59	142.79	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	08/18/2011	14.37	141.01	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	10/04/2011	15.22	140.16	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	01/24/2012	15.32	140.06	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	04/06/2012	13.09	142.29	0	<49	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	07/02/2012	14.42	140.96	0	<40	<50	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-7 cont.	155.38	10/4/2012	16.20	139.18	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	1/23/2013	13.27	142.11	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	4/22/2013	14.30	141.08	0	<50	52	<0.50	<0.50	<0.50	<1.0	
	155.38	7/31/2013	16.30	139.08	0	Insufficient Water to Sample						
	155.38	10/17/2013	16.77	138.61	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	2/24/2014	15.33	140.05	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	155.38	4/17/2014	13.82	141.56	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
MW-8	153.71	12/21/2010	11.63	142.08001	0	81	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	3/10/2011	11.38	142.33001	0	61	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	06/07/2011	11.54	142.17	0	71	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	08/18/2011	12.47	141.24	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/04/2011	12.90	140.81	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	01/24/2012	12.52	141.19	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	04/06/2012	11.35	142.36	0	160	270	<0.50	3.7	7.8	91	
	153.71	07/02/2012	12.50	141.21	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/4/2012	13.89	139.82	0	<50	<50	<0.50	<0.50	<0.50	2.4	
	153.71	1/23/2013	13.06	140.65	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	4/22/2013	12.82	140.89	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	7/31/2013	13.63	140.08	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	10/17/2013	14.48	139.23	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.71	2/24/2014	13.56	140.15	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
153.71	4/17/2014	11.90	141.81	0	<50	<50	<0.50	<0.50	<0.50	<1.0		
MW-9	153.37	12/21/2010	10.53	142.84	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	3/10/2011	10.86	142.51	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	06/07/2011	11.36	142.01	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	08/18/2011	12.52	140.85	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	10/04/2011	13.32	140.05	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	01/24/2012	11.23	142.14	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	04/06/2012	10.98	142.39	0	<40	340	<0.50	4.4	9	120	
	153.37	07/02/2012	12.58	140.79	0	<40	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	10/4/2012	14.31	139.06	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	1/23/2013	11.11	142.26	0	<50	<50	<0.50	<0.50	<0.50	<1.0	

Table 3
Historical Groundwater Monitoring Data and Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	TOC* (ft)	DATE	DTW (ft)	GWE* (ft)	LNAPL (ft)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Comments
MW-9 cont.	153.37	4/22/2013	12.22	141.15	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	7/31/2013	14.10	139.27	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	10/17/2013	14.56	138.81	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	2/24/2014	12.85	140.52	0	<50	<50	<0.50	<0.50	<0.50	<1.0	
	153.37	4/17/2014	11.73	141.64	0	<50	<50	<0.50	<0.50	<0.50	<1.0	

NOTES:

* TOC and GWE are in feet above mean sea level.

BTEX compounds analyzed by Environmental Protection Agency Method 8260B

TPH-DRO analyzed by method Luft/TPHd with silica gel cleanup

TPH-GRO analyzed by Environmental Protection Agency Method 8015B

Free product correlates to light non-aqueous phase liquid

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

ID = Identification

TOC = Top of casing

ft = Feet

DTW = Depth to water

GWE = Groundwater elevation

µg/L = Micrograms per liter

LNAPL = Light non-aqueous phase liquid

B = Benzene

T = Toluene

E = Ethylbenzene

X = Total xylenes

TPH-DRO = Total petroleum hydrocarbons as diesel/diesel range organics

TPH-GRO = Total petroleum hydrocarbons as gasoline/gasoline range organics

ND = Non-detect

-- = Not analyzed/applicable

Table 4
 Historical Groundwater Analytical Results - Oxygenate Compounds
 Unocal No. 5781 (351640)
 3535 Pierson Street
 Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
MW-A	12/18/1990	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/3/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/7/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/1991	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/1992	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/4/1992	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/10/1993	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/10/1994	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/9/1995	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/1996	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/5/1997	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/2/1998	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/22/1999	ND	--	--	--	--	--	--	--	--	--	--	--	--
	2/26/2000	ND	--	--	--	--	--	--	--	--	--	--	--	--
	3/7/2001	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--
	2/22/2002	<0.50	--	--	--	--	--	--	--	--	--	--	--	--
	2/22/2003	<2.0	<100	<500	<2.0	<2.0	<2.0	<2.0	<2.0	<0.50	--	--	--	--
	2/3/2004	<2.0	<5.0	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--
	2/18/2005	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--
	3/29/2006	0.54	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--
	3/28/2007	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--
	3/22/2008	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--
	3/27/2009	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--
	3/23/2010	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--
	9/29/2010	0.63	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--
	12/21/2010	0.65	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--
3/10/2011	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	
06/07/2011	0.57	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	
08/18/2011	0.61	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	140	11	69
10/04/2011	0.72	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<100	13	69
01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
07/02/2012	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
10/4/2012	0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
1/23/2013	0.55	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
4/22/2013	0.59	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
7/31/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	
MW-4	6/16/2010	5.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	
	9/29/2010	7.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	
	12/21/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	
	3/10/2011	2.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	
	06/07/2011	1.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)	
MW-4 cont.	08/18/2011	4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.04	<100	4.6	52	
	10/04/2011	3.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.03	100	4.3	50	
	01/24/2012	1.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	04/06/2012	2.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	07/02/2012	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	10/4/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	4/22/2013	2.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	7/31/2013	0.95	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	MW-5	6/16/2010	<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--
9/29/2010		52	<1000	<25000	<50	<50	<50	<50	<50	<1000	--	--	--	--	
12/21/2010		<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--	
3/10/2011		<50	<1000	<25000	<50	<50	<50	<50	<50	<100	--	--	--	--	
06/07/2011		24	150	330	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--	
08/18/2011		56	44	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	9.7	15,000	<0.44	<1.0	
10/04/2011		42	<250	<6,200	<12	<12	<12	<12	<12	<100	1.9	17,000	<0.44	1.3	
01/24/2012		<25	<500	<12,000	<25	<25	<25	<25	<25	--	--	--	--	--	
04/06/2012		12	<120	<3,100	<6.2	<6.2	<6.2	<6.2	<6.2	--	--	--	--	--	
07/02/2012		26	<500	<12,000	<25	<25	<25	<25	<25	--	--	--	--	--	
10/4/2012		No Sample Collected - Free Product in Well													
1/23/2013		<25	<500	<12,000	<25	<25	<25	<25	<25	--	--	--	--	--	
4/22/2013		2.9	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
7/31/2013		9.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
10/17/2013		<10	<200	<5,000	<10	<10	<10	<10	<10	--	--	--	--	--	
2/24/2014	1.7	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--		
4/17/2014	1.4	310	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--		
MW-6	12/21/2010	32	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--	
	3/10/2011	4.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--	
	06/07/2011	4.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--	
	08/18/2011	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.0027	<200	18	66	
	10/04/2011	3.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	100	24	78	
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	07/02/2012	0.56	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	10/4/2012	0.75	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	4/22/2013	0.53	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	7/31/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	10/17/2013	16	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	2/24/2014	47	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	

Table 4
 Historical Groundwater Analytical Results - Oxygenate Compounds
 Unocal No. 5781 (351640)
 3535 Pierson Street
 Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
MW-7	12/21/2010	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.0012	<500	3.8	100
	10/04/2011	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<500	4.2	100
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/30/2013	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
MW-8	12/21/2010	3.9	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	2.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	3.6	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	2.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	140	1.5	65
	10/04/2011	1.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	190	2.8	67
	01/24/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	1.5	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	0.69	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	1.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.88	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	0.79	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	0.78	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	1.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
MW-9	12/21/2010	1.2	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	3/10/2011	0.90	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	06/07/2011	1.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	--	--	--	--
	08/18/2011	2.1	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.001	<500	2.7	47
	10/04/2011	2.4	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<100	<0.0010	<200	3.2	47
	01/24/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	04/06/2012	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	07/02/2012	2.0	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/4/2012	1.3	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	1/23/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/22/2013	0.83	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	7/31/2013	1.8	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	10/17/2013	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	2/24/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--
	4/17/2014	<0.50	<10	<250	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--

Table 4
Historical Groundwater Analytical Results - Oxygenate Compounds
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	MTBE (µg/L)	TBA (µg/L)	ETHANOL (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	METHANOL (µg/L)	METHANE (mg/L)	FERROUS IRON (mg/L)	NITRATE (AS N) (mg/L)	SULFATE (mg/L)
---------	------	----------------	---------------	-------------------	----------------	----------------	----------------	---------------	---------------	--------------------	-------------------	---------------------------	-----------------------------	-------------------

NOTES:

Oxygenate compounds analyzed by Environmental Protection Agency Method 8260B

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

Free product correlates to light non-aqueous phase liquid

ID = Identification

-- = Not analyzed

µg/L = Micrograms per liter

ND = Non-detect

MTBE = Methyl t-butyl ether

TBA = t-butyl alcohol

DIPE = Diisopropyl ether

ETBE = Ethyl t-butyl ether

TAME = t-amyl methyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

Table 5
Additional Historical Analytical Results
Unocal No. 5781 (351640)
3535 Pierson Street
Oakland, California

WELL ID	DATE	Dichloro-difluoromethane (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	cis-1,2-DCE (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloropropane (µg/l)	cis-1,3-Dichloropropene (µg/l)
MW-A	2/3/2004	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	2/18/2005	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/29/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/28/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/22/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/27/2009	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

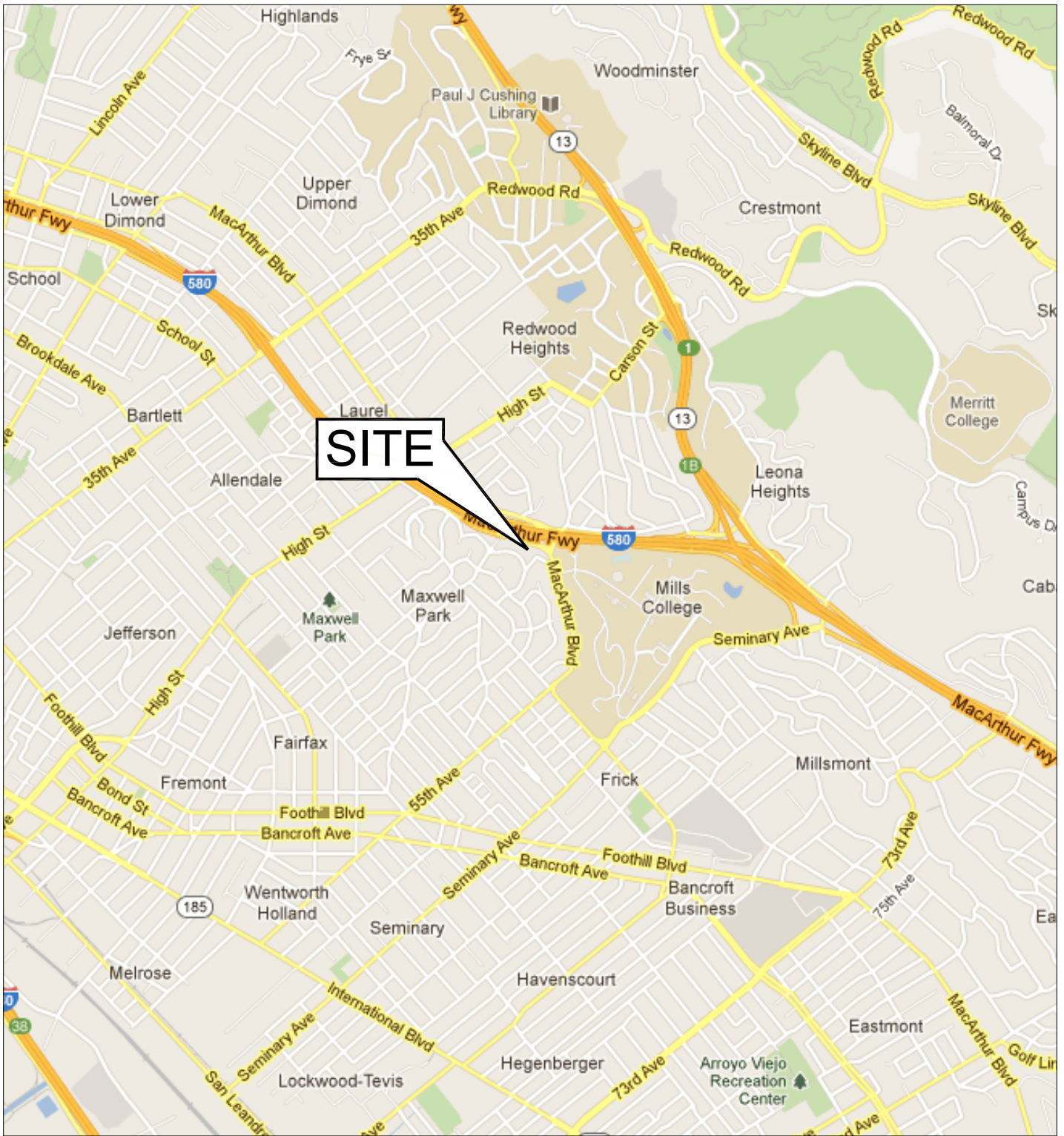
WELL ID	DATE	1,1,2,2-Tetrachloroethane (µg/l)	Tetrachloroethene (PCE) (µg/l)	Trichlorotrifluoroethane (µg/l)	1,1,1-Trichloroethane (µg/l)	1,1,2-Trichloroethane (µg/l)	Trichloroethene (TCE) (µg/l)	Trichlorofluoromethane (µg/l)	Vinyl chloride (µg/l)
MW-A	2/3/2004	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
	2/18/2005	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
	3/29/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/28/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/22/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	3/27/2009	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

NOTES:

ND<# = Analyte not detected at or above indicated laboratory practical quantitation limit

ID = Identification

FIGURES



North

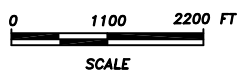


FIGURE 1

SITE LOCATION MAP

UNOCAL NO. 5781

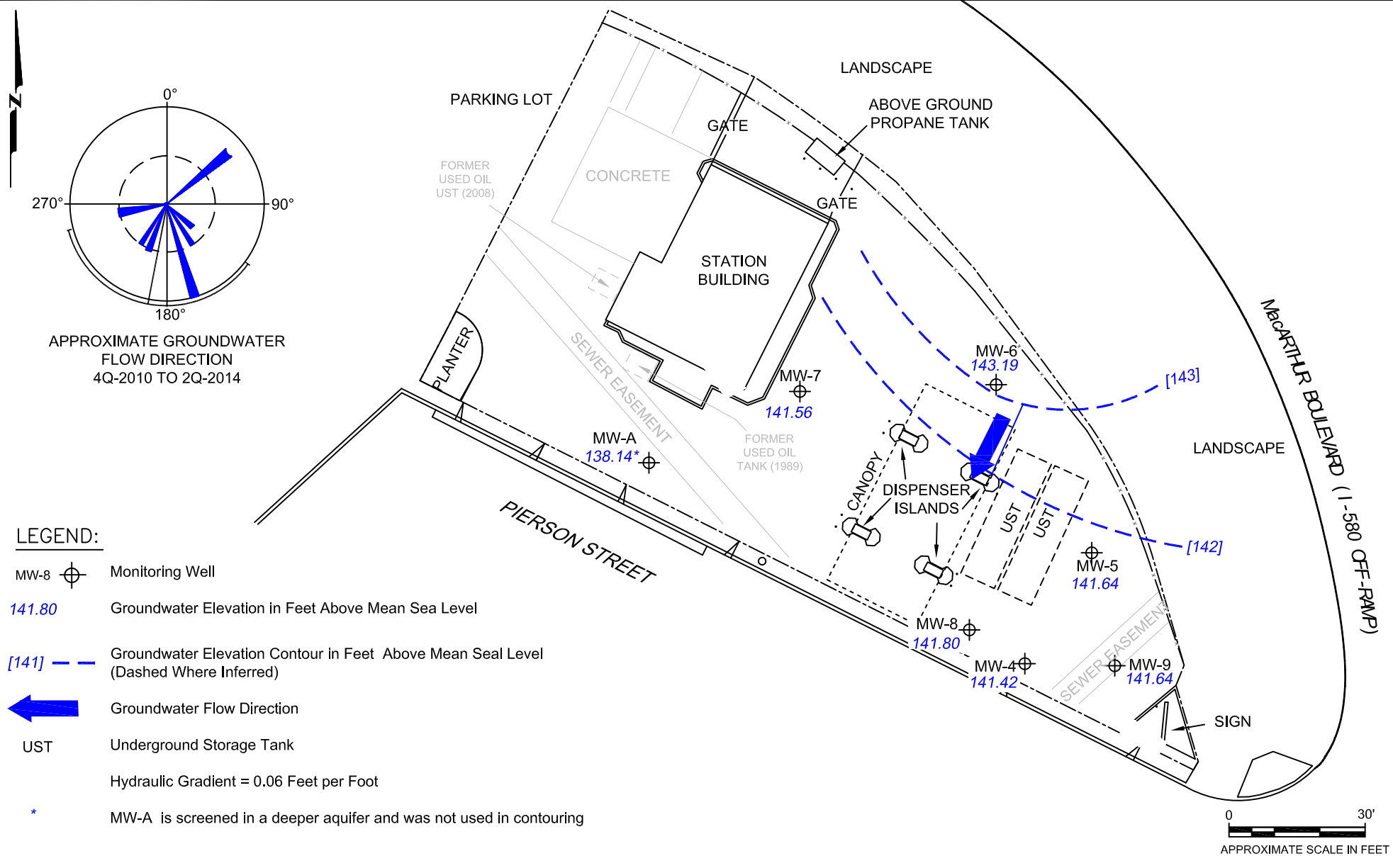
(351640)

3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	DRAWN BY 04/15/2014
FILE NO. 351640	PREPARED BY CD
REVISION NO.	REVIEWED BY JH



P:\ENV\01231-CHEVRO\76PRODUCTS_TRANSFER_SITES\351640_5781_OAKLAND\7.0 DELIVERABLES\7.2 CADD\2014\FIGURE 2_GWE_351640_2Q14.DWG



GROUNDWATER ELEVATION CONTOUR MAP - SECOND QUARTER 2014

RO253, Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California

AECOM
2020 L STREET SUITE 400
SACRAMENTO, CALIFORNIA 95811
PHONE: (916) 414-5800
FAX: (916) 414-5850
WEB: HTTP://WWW.AECOM.COM



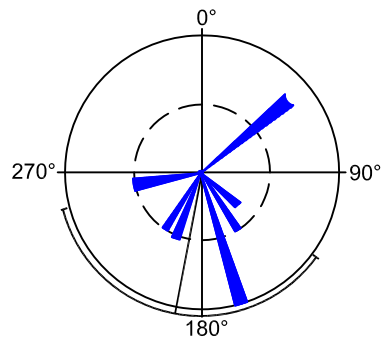
DESIGNED BY:	REVISIONS			
	NO.:	DESCRIPTION:	DATE:	BY:
DRAWN BY:				
JH				
CHECKED BY:				
DF				
APPROVED BY:				
JH				

FIGURE NUMBER:

2

SCALE:	DATE:	PROJECT NUMBER:
1" = 30'	07/08/2014	60314299

P:\ENV\01231-CHEVRO\76PRODUCTS_TRANSFER_SITES\351640_5781_OAKLAND\7.0 DELIVERABLES\7.2 CADD\2014\FIGURE 3 CONC 2Q14_351640.DWG



APPROXIMATE GROUNDWATER FLOW DIRECTION
4Q-2010 TO 2Q-2014

Legend

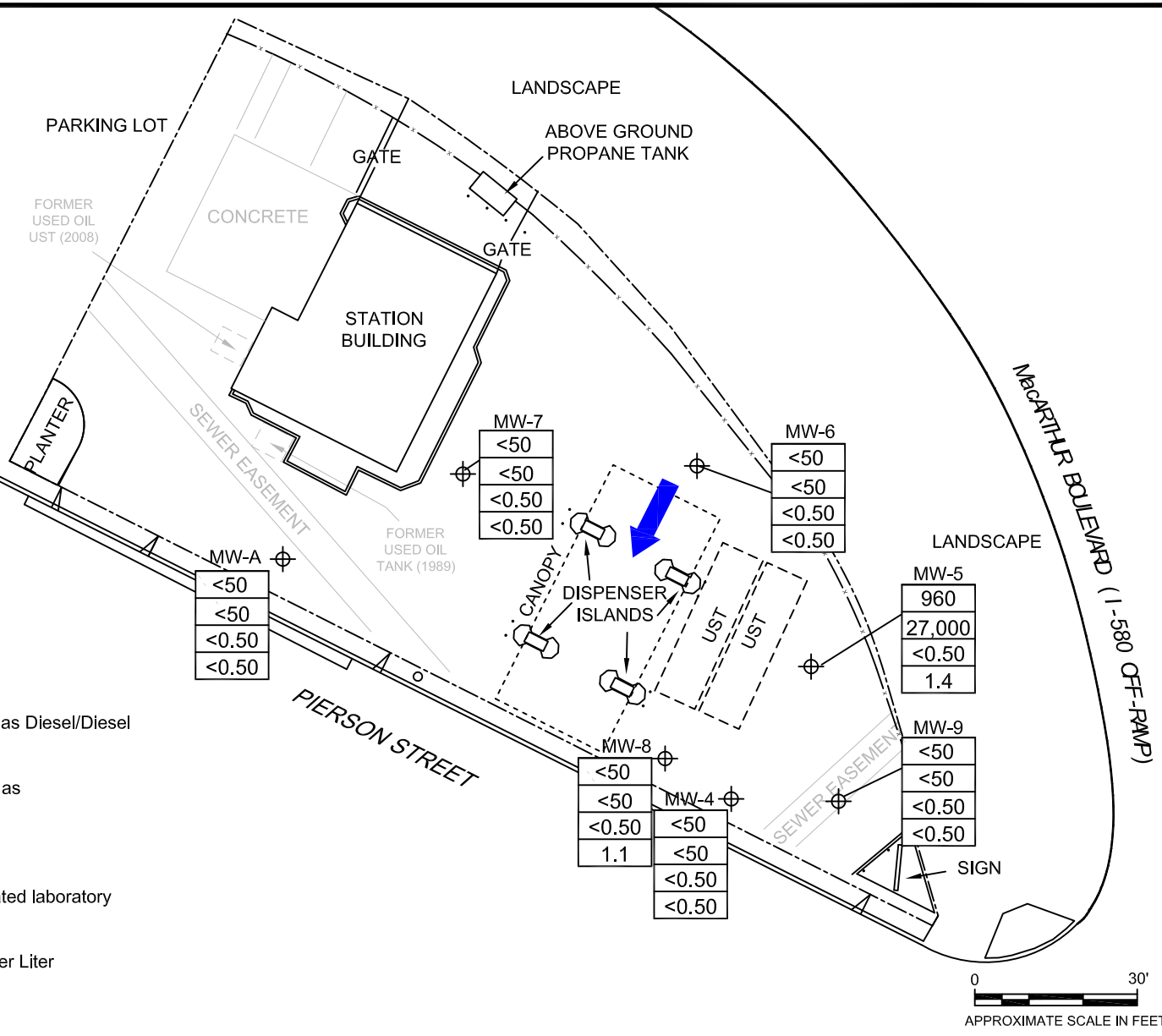
- MW-A Monitoring Well
- Groundwater Flow Direction
- UST Underground Storage Tank

TPH-DRO	TPH-DRO = Total Petroleum Hydrocarbons as Diesel/Diesel Range Organics
TPH-GRO	TPH-GRO = Total Petroleum Hydrocarbons as Gasoline/Gasoline Range Organics
Benzene	
MTBE	

MTBE = Methyl T-Butyl Ether

<# = Analyte not detected at or above indicated laboratory practical quantitation limit

Analyte Results Expressed in Micrograms per Liter



Base map created by Delta Consultants, Inc.

**GROUNDWATER CONCENTRATION MAP -
SECOND QUARTER 2014**

RO253, Unocal No. 5781 (351640)
3535 Pierson Street, Oakland, California

SCALE: 1" = 30'	DATE: 6/9/2014	PROJECT NUMBER: 60314299
--------------------	-------------------	-----------------------------

AECOM
2020 L STREET SUITE 400
SACRAMENTO, CALIFORNIA 95811
PHONE: (916) 414-5800
FAX: (916) 414-5850
WEB: HTTP://WWW.AECOM.COM



DESIGNED BY:	REVISIONS			
	NO.:	DESCRIPTION:	DATE:	BY:
DRAWN BY: JH				
CHECKED BY: DF				
APPROVED BY: JH				

FIGURE NUMBER:

3

ATTACHMENT A
April 17, 2014, Groundwater Data Field
Sheets



GETTLER-RYAN INC.



TRANSMITTAL

April 28, 2014
G-R #385641

TO: Mr. Jim Harms
AECOM
10461 Old Placerville Road #170
Sacramento, California 95827

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6805 Sierra Court, Suite G
Dublin, California 94568

RE: **Chevron Facility**
#351640/5781
3535 Pierson Street
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Second Quarter Event of April 17, 2014

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/351640 5781

WELL CONDITION STATUS SHEET

Client/
 Facility #: **Chevron #351640 / 5781**
 Site Address: **3535 Pierson Street**
 City: **Oakland, CA**

Job #: **385641**
 Event Date: **4-17-14**
 Sampler: **FT**

WELL ID	Vault Frame Condition	Gasket/O-Ring <small>(M) Missing (R) Replaced</small>	Bolts <small>(M) Missing (R) Replaced</small>	Bolt Flanges <small>B=Broken S=Stripped R=Retap</small>	Apron Condition <small>C=Cracked B=Broken G=Gone</small>	Grout Seal <small>(Deficient) Inches from TOC</small>	Casing <small>(Condition prevents tight cap seal)</small>	REPLACE LOCK <small>Y/N</small>	REPLACE CAP <small>Y/N</small>	WELL VAULT <small>Manufacture/Size/ # of Bolts</small>	Pictures Taken <small>Y/N</small>	
MW-A	OK		→			→				Emco 8" h Emco 12" x 12"		
MW-4	OK		→			→						
MW-5	OK		→			→						
MW-6	OK		→		C	OK →						
MW-7	OK	R	OK	→		→						
MW-8	OK		→			→						
MW-9	OK		→		C	OK →	↓	↓	↓		↓	

Comments _____

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 4.17.14 (inclusive)
 Sampler: FR

Well ID: MW-A
 Well Diameter: 2/4 in.
 Total Depth: 45.06 ft.
 Depth to Water: 16.65 ft.
28.41 xVF .17 = 4.82

Date Monitored: 4-17-14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 14.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 22.33

Purge Equipment:
 Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump /
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer /
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1030
 Sample Time/Date: 1055 14.17.14
 Approx. Flow Rate: 1.5 gpm.
 Did well de-water? No If yes, Time: _____

Weather Conditions: SUNNY
 Water Color: CLEAR Odor: Y / 10
 Sediment Description: NONE
 Volume: _____ gal. DTW @ Sampling: 20.15

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1033</u>	<u>4.5</u>	<u>7.48</u>	<u>586</u>	<u>18.6</u>	_____	_____
<u>1036</u>	<u>9.0</u>	<u>7.49</u>	<u>581</u>	<u>18.3</u>	_____	_____
<u>1040</u>	<u>19.0</u>	<u>7.42</u>	<u>578</u>	<u>18.0</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- A	<u>4</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	<u>2</u> x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc (8015)

COMMENTS: _____

Add/Replaced Gasket: XXXXXX Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 4-17-14 (inclusive)
 Sampler: FR

Well ID: MW-4
 Well Diameter: 2 1/4 in.
 Total Depth: 24.75 ft.
 Depth to Water: 11.96 ft.
12.79 x VF .66 = 8.44

Date Monitored: 4-17-14

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 250 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.51

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer _____
 Stack Pump /
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1215
 Sample Time/Date: 1210 / 4-17-14
 Approx. Flow Rate: 2.0 gpm.
 Did well de-water? yes If yes, Time: 1224 Volume: 17.0 gal. DTW @ Sampling: 11.96

Weather Conditions: SUNNY
 Water Color: CLEAN Odor: Y / (N)
 Sediment Description: NONE

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1219</u>	<u>8.0</u>	<u>7.44</u>	<u>635</u>	<u>18.3</u>	/	/
<u>1223</u>	<u>16.0</u>	<u>7.39</u>	<u>627</u>	<u>18.7</u>	/	/
_____	_____	_____	_____	_____	/	/
_____	_____	_____	_____	_____	/	/

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-4</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	<u>2</u> x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc (8015)

COMMENTS: _____

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN Inc.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 4.17.14 (inclusive)
 Sampler: FT

Well ID: MW- 5
 Well Diameter: 21 in.
 Total Depth: 19.93 ft.
 Depth to Water: 12.02 ft.
7.91 xVF .66 = 5.22

Date Monitored: 4.17.14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 16.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.60

Purge Equipment:

Disposable Bailer _____
 Stainless Steel Bailer /
 Stack Pump /
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer _____
 Pressure Bailer /
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbent Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1330
 Sample Time/Date: 1325 / 4.17.14
 Approx. Flow Rate: 2.0 gpm.
 Did well de-water? Yes If yes, Time: 1335

Weather Conditions: SUNNY
 Water Color: CLEAN Odor: DIRTY STRONG
 Sediment Description: NONE

Volume: 7.0 gal. DTW @ Sampling: 12.02

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1333</u>	<u>5.5</u>	<u>7.56</u>	<u>872</u>	<u>18.4</u>	<u>/</u>	<u>/</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW- 5</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	<u>2</u> x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc (8015)
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 4.17.14 (inclusive)
 Sampler: FR

Well ID: MW-6
 Well Diameter: 2/4 in.
 Total Depth: 19.97 ft.
 Depth to Water: 11.43 ft.
8.54 xVF .17 = 1.45

Date Monitored: 4.17.14

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.13

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1300
 Sample Time/Date: 1255 / 4.17.14
 Approx. Flow Rate: _____ gpm.
 Did well de-water? NO If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUNNY
 Water Color: LT. BRN. Odor: Y / @
 Sediment Description: S-SILT
 DTW @ Sampling: 11.43

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS)	Temperature (° / F)	D.O. (mg/L)	ORP (mV)
<u>1303</u>	<u>1.5</u>	<u>7.61</u>	<u>687</u>	<u>18.9</u>	_____	_____
<u>1306</u>	<u>3.0</u>	<u>7.59</u>	<u>683</u>	<u>18.6</u>	_____	_____
<u>1309</u>	<u>4.0</u>	<u>7.57</u>	<u>679</u>	<u>18.4</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-6</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	<u>2</u> x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc (8015)

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 4-17-14 (inclusive)
 Sampler: FR

Well ID: MW-7
 Well Diameter: 2/4 in.
 Total Depth: 19.70 ft.
 Depth to Water: 13.82 ft.
5.88 x VF .17 = .99

Date Monitored: 4-17-14

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 3.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.99

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1110 Weather Conditions: SUNNY
 Sample Time/Date: 1105 / 4-17-14 Water Color: CLEAN Odor: Y / (N)
 Approx. Flow Rate: _____ gpm. Sediment Description: NONE
 Did well de-water? YES If yes, Time: 1114 Volume: 1.5 gal. DTW @ Sampling: 13.82

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1113</u>	<u>1.0</u>	<u>7.46</u>	<u>612</u>	<u>18.2</u>	<u>/</u>	<u>/</u>
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-7</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	<u>2</u> x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc (8015)
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

COMMENTS:

Add/Replaced Gasket: Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER - RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 4-17-14 (inclusive)
 Sampler: FT

Well ID: MW-8
 Well Diameter: 214 in.
 Total Depth: 19.94 ft.
 Depth to Water: 11.90 ft.
8.04 x VF .17 = 1.36

Date Monitored: 4-17-14

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.50	12" = 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.50

Purge Equipment:

Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:

Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1135
 Sample Time/Date: 1155 14-17-14
 Approx. Flow Rate: ✓ gpm.
 Did well de-water? No If yes, Time: _____ Volume: _____ gal.

Weather Conditions: SUNNY
 Water Color: CLEAN Odor: Y / 0
 Sediment Description: NONE
 DTW @ Sampling: 12.90

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS)	Temperature (°/ F)	D.O. (mg/L)	ORP (mV)
<u>1138</u>	<u>1.5</u>	<u>7.27</u>	<u>631</u>	<u>18.8</u>	_____	_____
<u>1141</u>	<u>3.0</u>	<u>7.24</u>	<u>628</u>	<u>18.7</u>	_____	_____
<u>1144</u>	<u>4.0</u>	<u>7.22</u>	<u>625</u>	<u>18.5</u>	_____	_____

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-8</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	<u>2</u> x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc (8015)

COMMENTS:

Add/Replaced Gasket: _____ Add/Replaced Bolt: _____ Add/Replaced Lock: _____ Add/Replaced Plug: _____



GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #351640 / 5781
 Site Address: 3535 Pierson Street
 City: Oakland, CA

Job Number: 385641
 Event Date: 4.17.14 (inclusive)
 Sampler: FT

Well ID: MW-9
 Well Diameter: 2/4 in.
 Total Depth: 19.68 ft.
 Depth to Water: 11.73 ft.
7.95 xVF .17 = 1.35

Date Monitored: 4.17.14

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Check if water column is less than 0.50 ft.

x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.32

Purge Equipment:
 Disposable Bailer
 Stainless Steel Bailer _____
 Stack Pump _____
 Suction Pump _____
 Grundfos _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Sampling Equipment:
 Disposable Bailer
 Pressure Bailer _____
 Metal Filters _____
 Peristaltic Pump _____
 QED Bladder Pump _____
 Other: _____

Time Started: _____ (2400 hrs)
 Time Completed: _____ (2400 hrs)
 Depth to Product: _____ ft
 Depth to Water: _____ ft
 Hydrocarbon Thickness: _____ ft
 Visual Confirmation/Description: _____
 Skimmer / Absorbant Sock (circle one)
 Amt Removed from Skimmer: _____ gal
 Amt Removed from Well: _____ gal
 Water Removed: _____

Start Time (purge): 1240 Weather Conditions: SUNNY
 Sample Time/Date: 1235 / 4.17.14 Water Color: CLEAN Odor: Y / 0
 Approx. Flow Rate: _____ gpm. Sediment Description: NONE
 Did well de-water? yes If yes, Time: 1246 Volume: 3.0 gal. DTW @ Sampling: 11.73

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>1243</u>	<u>1.5</u>	<u>7.45</u>	<u>651</u>	<u>18.9</u>	/	/
<u>1246</u>	<u>3.0</u>	<u>7.41</u>	<u>647</u>	<u>18.5</u>	/	/

LABORATORY INFORMATION

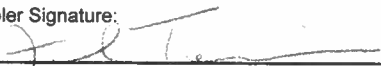
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>MW-9</u>	<u>6</u> x voa vial	YES	HCL	BC LABS	TPH-GRO(8015)/BTEX+MTBE(8260)/8 OXYS(8260)
	<u>2</u> x 1 liter ambers	YES	NP	BC LABS	TPH-DRO w/sgc (8015)

COMMENTS: _____

CHAIN OF CUSTODY FORM

Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583

COC 1 of 1

Union Oil Site ID: <u>5781</u>				Union Oil Consultant: <u>AECOM</u>				ANALYSES REQUIRED																
Site Global ID: <u>T0600101467</u>				Consultant Contact: <u>JAMES HALLMS</u>				TPH - Diesel by EPA 8015M W/SGC	TPH - G by 8015 (8015)	BTEX/MTBE/ 8015 by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B 8015 OXYS (81)											Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>	
Site Address: <u>3535 PIERSON ST</u> <u>OAKLAND CA</u>				Consultant Phone No.: <u>(415) 361-6412</u>																			Special Instructions	
Union Oil PM: <u>TIM BISHOP</u>				Sampling Company: <u>GETTLER-RYAN</u>																				
Union Oil PM Phone No.: <u>(925) 790-6463 / (925) 589-4662</u>				Sampled By (PRINT): <u>FRANK TELUCIONI</u>																				
Charge Code: <u>NWRTB-0 351640-0-LAB</u>				Sampler Signature: 																				
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.				BC Laboratories, Inc. Project Manager: <u>Molly Meyers</u> 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911																				
SAMPLE ID				Sample Time	# of Containers	TPH - Diesel by EPA 8015M W/SGC	TPH - G by 8015 (8015)	BTEX/MTBE/ 8015 by EPA 8260B	Ethanol by EPA 8260B	EPA 8260B 8015 OXYS (81)											Notes / Comments			
Field Point Name	Matrix	DTW	Date (yymmdd)																					
<u>QA</u>	<u>W-S-A</u>		<u>140417</u>		<u>2</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>															
<u>MW- A</u>	<u>W-S-A</u>			<u>1055</u>	<u>8</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>														
<u>MW- 4</u>	<u>W-S-A</u>			<u>1210</u>	<u>8</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>														
<u>MW 5</u>	<u>W-S-A</u>			<u>1325</u>	<u>8</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>														
<u>MW- 6</u>	<u>W-S-A</u>			<u>1255</u>	<u>8</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>														
<u>MW- 7</u>	<u>W-S-A</u>			<u>1105</u>	<u>8</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>														
<u>MW- 8</u>	<u>W-S-A</u>			<u>1155</u>	<u>8</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>														
<u>MW- 9</u>	<u>W-S-A</u>			<u>1235</u>	<u>8</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>														
	<u>W-S-A</u>																							
	<u>W-S-A</u>																							
	<u>W-S-A</u>																							
	<u>W-S-A</u>																							
Relinquished By: <u>Frank Telucioni</u> Company: <u>G-12</u> Date / Time: <u>4-18-14 1345</u>				Relinquished By: <u>G-R Villaluna</u> Company: <u></u> Date / Time: <u>4/21/14 2:25</u>				Relinquished By: <u></u> Company: <u></u> Date / Time: <u></u>																
Received By: <u>GETTLER-RYAN</u> Company: <u></u> Date / Time: <u>4-21-14 1135</u>				Received By: <u>Tim Bishop</u> Company: <u></u> Date / Time: <u>4-21-14 1135</u>				Received By: <u></u> Company: <u></u> Date / Time: <u></u>																

ATTACHMENT B
BC Laboratories, Inc. Analytical Report
#5781



Date of Report: 05/02/2014

Jim Harms

AECOM

10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Client Project: 351640
BCL Project: 5781
BCL Work Order: 1408890
Invoice ID: B172315

Enclosed are the results of analyses for samples received by the laboratory on 4/21/2014. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014; AK UST101

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.



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BC Laboratories, Inc.

Environmental Testing Laboratory Since 1949

CHAIN OF CUSTODY FORM
Union Oil Company of California ■ 6101 Bollinger Canyon Road ■ San Ramon, CA 94583
14-08890 COC 1 of 1

Union Oil Site ID: 5781	Union Oil Consultant: ALCOM	Analyses Required	Turnaround Time (TAT): Standard <input checked="" type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours <input type="checkbox"/>									
Site Global ID: T0600101467	Consultant Contact: JAMES HAMMS	EPA 8260B (8)	Special Instructions									
Site Address: 3535 PIERSON ST.	Consultant Phone No.: (916) 361-6412	Ethanol by EPA 8260B										
Union Oil PM: TIM BISHOP	Sampling Company: GETTLER RYAN	BTEX/M/TBE by EPA 8260										
Union Oil PM Phone No.: (925) 790-6413 (925) 588-9662	Sampled By: (PRINT) FRANK TENNINONI	TPH - G by (8015)										
Charge Code: NWRTB-0351640-0-LAB	Sampler Signature: <i>[Signature]</i>	TPH - Diesel by EPA 8015 (155)										
This is a LEGAL document. ALL fields must be filled out CORRECTLY and COMPLETELY.	BC Laboratories, Inc. Project Manager: Molly Meyers 4100 Atlas Court, Bakersfield, CA 93308 Phone No. 661-327-4911											
	SAMPLE ID		Notes / Comments									
	Field Point Name	Matrix	DTW	Date (yyymmdd)	Sample Time	# of Containers	Relinquished By	Company	Date / Time	Relinquished By	Company	Date / Time
	-1 QA	W-S-A		140417	1055	2	U-R Meyers	ALCOM	4/21/14 2:05	U-R Meyers	ALCOM	4/21/14 18:30
	-2 MW-A	W-S-A			1210	8	James Bishop	BC LABS	4/21/14 17:25	James Bishop	BC LABS	4/21/14 18:30
	-3 MW-4	W-S-A			1325	8						
	-4 MW-5	W-S-A			1255	8						
	-5 MW-6	W-S-A			1105	8						
	-6 MW-7	W-S-A			1155	8						
	-7 MW-8	W-S-A			1235	8						
-8 MW-9	W-S-A											
	W-S-A											
	W-S-A											
	W-S-A											
	W-S-A											

SHIP BY DISTRIBUTION
 MW TRUCK
 SUB-OUT

REL. 4-21-14 21:40
 GETTLER RYAN FRIDGE 4-21-14 17:00
 REL. 4-21-14 21:40
 4-21-14 17:00

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BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 1 of 2

Submission #: 14-08890

SHIPPING INFORMATION
 Federal Express UPS Hand Delivery
 BC Lab Field Service Other (Specify) _____

SHIPPING CONTAINER
 Ice Chest None Box
 Other (Specify) _____

FREE LIQUID
 YES NO

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals Ice Chest Containers
 Intact? Yes No Intact? Yes No None Comments: _____

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received YES NO
 Emissivity: 0.97 Container: VOA Thermometer ID: 207 Date/Time: 4/21/14
 Temperature: (A) 1.4 °C (C) 1.1 °C Analyst Init: M

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A(2)									
40ml VOA VIAL	()	A(6)	A(6)	A(6)	A(6)	A(6)	A(6)	A(6)	()	()
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER				BC	BC					
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments: _____
 Sample Numbering Completed By: MW Date/Time: 4/22/14 @ 0830



BC LABORATORIES INC. COOLER RECEIPT FORM Rev. No. 15 07/01/13 Page 2 Of 2

Submission #: 14-08890

SHIPPING INFORMATION Federal Express <input type="checkbox"/> UPS <input type="checkbox"/> Hand Delivery <input type="checkbox"/> BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____		SHIPPING CONTAINER Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/> Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____	FREE LIQUID YES <input type="checkbox"/> NO <input type="checkbox"/>
--	--	---	--

Refrigerant: Ice Blue Ice None Other Comments: _____

Custody Seals Ice Chest Containers None Comments: _____

Intact? Yes No Intact? Yes No

All samples received? Yes No All samples containers intact? Yes No Description(s) match COC? Yes No

COC Received
 YES NO

Emissivity: 0.97 Container: Amber Thermometer ID: 207 Date/Time: 4/22/14 2:40
 Temperature: (A) 1.9 °C / (C) 2.0 °C Analyst Init: M

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	()	()	()	()	()	()	()	()	()	()
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER		BC	BC			BC	BC	BC		
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										
SMART KIT										
Summa Canister										

Comments: _____
 Sample Numbering Completed By: MV Date/Time: 4/22/14 2:08:30



AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1408890-01	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: QA-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 00:00 Sample Depth: --- Lab Matrix: Water Sample Type: Trip Blank Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): QA Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	---

1408890-02	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-A-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 10:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-A Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1408890-03	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-4-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 12:10 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-4 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1408890-04	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-5-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 13:25 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-5 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1408890-05	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-6-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 12:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-6 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1408890-06	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-7-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 11:05 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-7 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information
------------	---------------------------

1408890-07	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-8-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 11:55 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-8 Matrix: W Sample QC Type (SACode): CS Cooler ID:
-------------------	--	--

1408890-08	COC Number: --- Project Number: 5781 Sampling Location: --- Sampling Point: MW-9-W-140417 Sampled By: GRD	Receive Date: 04/21/2014 21:40 Sampling Date: 04/17/2014 12:35 Sample Depth: --- Lab Matrix: Water Sample Type: Water Delivery Work Order: Global ID: T0600101467 Location ID (FieldPoint): MW-9 Matrix: W Sample QC Type (SACode): CS Cooler ID:
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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-01	Client Sample Name: 5781, QA-W-140417, 4/17/2014 12:00:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	96.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	94.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 15:59	JMS	MS-V10	1	BXD1876

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-01	Client Sample Name: 5781, QA-W-140417, 4/17/2014 12:00:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	105	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/23/14 19:31	jjh	GC-V9	1	BXD1833

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-02	Client Sample Name: 5781, MW-A-W-140417, 4/17/2014 10:55:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	97.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 16:42	JMS	MS-V10	1	BXD1876

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-02 **Client Sample Name:** 5781, MW-A-W-140417, 4/17/2014 10:55:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	98.8	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/23/14 19:51	jjh	GC-V9	1	BXD1833

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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1408890-02	Client Sample Name: 5781, MW-A-W-140417, 4/17/2014 10:55:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	74.7	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	04/24/14	05/01/14 18:17	MWB	GC-5	1	BXE0033

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AECOM
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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-03	Client Sample Name: 5781, MW-4-W-140417, 4/17/2014 12:10:00PM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	95.7	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.6	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 17:01	JMS	MS-V10	1	BXD1876

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AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-03	Client Sample Name: 5781, MW-4-W-140417, 4/17/2014 12:10:00PM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	102	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/23/14 20:12	jjh	GC-V9	1	BXD1833

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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1408890-03	Client Sample Name: 5781, MW-4-W-140417, 4/17/2014 12:10:00PM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	64.4	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	04/24/14	05/01/14 18:41	MWB	GC-5	1	BXE0033

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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-04	Client Sample Name: 5781, MW-5-W-140417, 4/17/2014 1:25:00PM
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	160	ug/L	5.0		EPA-8260B	ND	A01	2
Methyl t-butyl ether	1.4	ug/L	0.50		EPA-8260B	ND		1
Toluene	2.5	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	1100	ug/L	10		EPA-8260B	ND	A01	2
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	310	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			2
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	94.4	%	80 - 120 (LCL - UCL)		EPA-8260B			2
4-Bromofluorobenzene (Surrogate)	89.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			2

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 22:19	JMS	MS-V10	1	BXD1876
2	EPA-8260B	04/23/14	04/24/14 03:49	JMS	MS-V10	10	BXD1876

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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-04	Client Sample Name: 5781, MW-5-W-140417, 4/17/2014 1:25:00PM
----------------------------------	---

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	27000	ug/L	5000		EPA-8015B	ND	A01	1
a,a,a-Trifluorotoluene (FID Surrogate)	102	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/24/14 16:58	jjh	GC-V9	100	BXD1833

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Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1408890-04	Client Sample Name: 5781, MW-5-W-140417, 4/17/2014 1:25:00PM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	960	ug/L	50		Luft/TPHd	ND	A52	1
Tetracosane (Surrogate)	61.4	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	04/24/14	05/01/14 19:05	MWB	GC-5	1	BXE0033

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-05	Client Sample Name: 5781, MW-6-W-140417, 4/17/2014 12:55:00PM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	97.8	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	95.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	99.0	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 18:54	JMS	MS-V10	1	BXD1876

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-05	Client Sample Name: 5781, MW-6-W-140417, 4/17/2014 12:55:00PM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	107	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/24/14 17:18	jjh	GC-V9	1	BXD1833

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1408890-05	Client Sample Name: 5781, MW-6-W-140417, 4/17/2014 12:55:00PM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	71.6	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	04/24/14	05/01/14 19:29	MWB	GC-5	1	BXE0033

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-06	Client Sample Name: 5781, MW-7-W-140417, 4/17/2014 11:05:00AM
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Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	100	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	100	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	95.2	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 17:20	JMS	MS-V10	1	BXD1876

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-06 **Client Sample Name:** 5781, MW-7-W-140417, 4/17/2014 11:05:00AM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	105	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/24/14 17:38	jjh	GC-V9	1	BXD1833

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1408890-06	Client Sample Name: 5781, MW-7-W-140417, 4/17/2014 11:05:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	66.7	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	04/24/14	05/01/14 19:53	MWB	GC-5	1	BXE0033

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-07	Client Sample Name: 5781, MW-8-W-140417, 4/17/2014 11:55:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	1.1	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	101	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	97.3	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	102	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 19:13	JMS	MS-V10	1	BXD1876

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-07	Client Sample Name: 5781, MW-8-W-140417, 4/17/2014 11:55:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	95.6	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/24/14 17:58	jjh	GC-V9	1	BXD1833

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1408890-07	Client Sample Name: 5781, MW-8-W-140417, 4/17/2014 11:55:00AM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	57.6	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	04/24/14	05/01/14 20:16	MWB	GC-5	1	BXE0033

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

BCL Sample ID: 1408890-08	Client Sample Name: 5781, MW-9-W-140417, 4/17/2014 12:35:00PM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260B	ND		1
Ethylbenzene	ND	ug/L	0.50		EPA-8260B	ND		1
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Toluene	ND	ug/L	0.50		EPA-8260B	ND		1
Total Xylenes	ND	ug/L	1.0		EPA-8260B	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
t-Butyl alcohol	ND	ug/L	10		EPA-8260B	ND		1
Diisopropyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
Ethanol	ND	ug/L	250		EPA-8260B	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260B	ND		1
1,2-Dichloroethane-d4 (Surrogate)	98.1	%	75 - 125 (LCL - UCL)		EPA-8260B			1
Toluene-d8 (Surrogate)	99.9	%	80 - 120 (LCL - UCL)		EPA-8260B			1
4-Bromofluorobenzene (Surrogate)	98.8	%	80 - 120 (LCL - UCL)		EPA-8260B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260B	04/23/14	04/23/14 17:39	JMS	MS-V10	1	BXD1876

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1408890-08 **Client Sample Name:** 5781, MW-9-W-140417, 4/17/2014 12:35:00PM

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50		EPA-8015B	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	103	%	70 - 130 (LCL - UCL)		EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	04/22/14	04/24/14 18:18	jjh	GC-V9	1	BXD1833

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

BCL Sample ID: 1408890-08	Client Sample Name: 5781, MW-9-W-140417, 4/17/2014 12:35:00PM
----------------------------------	--

Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	ND		1
Tetracosane (Surrogate)	68.2	%	20 - 120 (LCL - UCL)		Luft/TPHd			1
Capric acid (Reverse Surrogate)	0	%	0 - 1 (LCL - UCL)		Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	04/24/14	05/01/14 21:28	MWB	GC-5	1	BXE0033

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXD1876						
Benzene	BXD1876-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BXD1876-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BXD1876-BLK1	ND	ug/L	0.50		
Ethylbenzene	BXD1876-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BXD1876-BLK1	ND	ug/L	0.50		
Toluene	BXD1876-BLK1	ND	ug/L	0.50		
Total Xylenes	BXD1876-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BXD1876-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BXD1876-BLK1	ND	ug/L	10		
Diisopropyl ether	BXD1876-BLK1	ND	ug/L	0.50		
Ethanol	BXD1876-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BXD1876-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BXD1876-BLK1	103	%	75 - 125 (LCL - UCL)		
Toluene-d8 (Surrogate)	BXD1876-BLK1	98.1	%	80 - 120 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BXD1876-BLK1	96.9	%	80 - 120 (LCL - UCL)		

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BXD1876										
Benzene	BXD1876-BS1	LCS	28.380	25.000	ug/L	114		70 - 130		
Toluene	BXD1876-BS1	LCS	28.600	25.000	ug/L	114		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BXD1876-BS1	LCS	10.330	10.000	ug/L	103		75 - 125		
Toluene-d8 (Surrogate)	BXD1876-BS1	LCS	10.000	10.000	ug/L	100		80 - 120		
4-Bromofluorobenzene (Surrogate)	BXD1876-BS1	LCS	10.250	10.000	ug/L	102		80 - 120		

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Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Volatile Organic Analysis (EPA Method 8260B)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals
								Percent Recovery	RPD	
QC Batch ID: BXD1876		Used client sample: N								
Benzene	MS	1407468-29	ND	28.420	25.000	ug/L		114		70 - 130
	MSD	1407468-29	ND	31.330	25.000	ug/L	9.7	125	20	70 - 130
Toluene	MS	1407468-29	ND	29.610	25.000	ug/L		118		70 - 130
	MSD	1407468-29	ND	30.670	25.000	ug/L	3.5	123	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	MS	1407468-29	ND	9.9800	10.000	ug/L		99.8		75 - 125
	MSD	1407468-29	ND	10.310	10.000	ug/L	3.3	103		75 - 125
Toluene-d8 (Surrogate)	MS	1407468-29	ND	10.070	10.000	ug/L		101		80 - 120
	MSD	1407468-29	ND	9.7300	10.000	ug/L	3.4	97.3		80 - 120
4-Bromofluorobenzene (Surrogate)	MS	1407468-29	ND	10.200	10.000	ug/L		102		80 - 120
	MSD	1407468-29	ND	9.8200	10.000	ug/L	3.8	98.2		80 - 120

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AECOM
10461 Old Placerville Rd, Suite 170
Sacramento, CA 95827

Reported: 05/02/2014 13:57
Project: 5781
Project Number: 351640
Project Manager: Jim Harms

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXD1833						
Gasoline Range Organics (C4 - C12)	BXD1833-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BXD1833-BLK1	110	%		70 - 130 (LCL - UCL)	

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BXD1833										
Gasoline Range Organics (C4 - C12)	BXD1833-BS1	LCS	936.01	1000.0	ug/L	93.6		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BXD1833-BS1	LCS	43.866	40.000	ug/L	110		70 - 130		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent		Lab Quals
								Recovery	RPD	
QC Batch ID: BXD1833		Used client sample: N								
Gasoline Range Organics (C4 - C12)	MS	1407468-26	ND	1005.3	1000.0	ug/L		101		70 - 130
	MSD	1407468-26	ND	980.24	1000.0	ug/L	2.5	98.0	20	70 - 130
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1407468-26	ND	45.755	40.000	ug/L		114		70 - 130
	MSD	1407468-26	ND	47.942	40.000	ug/L	4.7	120		70 - 130

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Project Manager: Jim Harms

Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BXE0033						
Diesel Range Organics (C12 - C24)	BXE0033-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BXE0033-BLK1	68.7	%	20 - 120 (LCL - UCL)		
Capric acid (Reverse Surrogate)	BXE0033-BLK1	0	%	0 - 1 (LCL - UCL)		

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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits		Lab
								Percent Recovery	RPD	
QC Batch ID: BXE0033										
Diesel Range Organics (C12 - C24)	BXE0033-BS1	LCS	316.79	500.00	ug/L	63.4		20 - 110		
Tetracosane (Surrogate)	BXE0033-BS1	LCS	13.526	20.000	ug/L	67.6		20 - 120		
Capric acid (Reverse Surrogate)	BXE0033-BS1	LCS	ND	100.00	ug/L	0		0 - 1		

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Total Petroleum Hydrocarbons (Silica Gel Treated)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		Lab Quals	
								Percent Recovery	RPD		Percent Recovery
QC Batch ID: BXE0033		Used client sample: N									
Diesel Range Organics (C12 - C24)	MS	1407468-44	ND	241.96	500.00	ug/L		48.4		20 - 110	Q03
	MSD	1407468-44	ND	240.46	500.00	ug/L	0.6	48.1	30	20 - 110	Q03
Tetracosane (Surrogate)	MS	1407468-44	ND	10.250	20.000	ug/L		51.2		20 - 120	
	MSD	1407468-44	ND	9.3020	20.000	ug/L	9.7	46.5		20 - 120	
Capric acid (Reverse Surrogate)	MS	1407468-44	ND	ND	100.00	ug/L		0		0 - 1	
	MSD	1407468-44	ND	ND	100.00	ug/L		0		0 - 1	

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Notes And Definitions

- MDL Method Detection Limit
- ND Analyte Not Detected at or above the reporting limit
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference
- A01 PQL's and MDL's are raised due to sample dilution.
- A52 Chromatogram not typical of diesel.
- Q03 Matrix spike recovery(s) is(are) not within the control limits.